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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,089	11/19/2001	Yuan Huan Lee	MR2349-721	8229
4586	7590	05/24/2004	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			CHORBAJI, MONZER R	
			ART UNIT	PAPER NUMBER
			1744	

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	09/988,089	LEE ET AL.	
	Examiner	Art Unit	
	MONZER R CHORBAJI	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities:

In claim 1, numbered line 13 includes a typographical error where "said starter" is repeated twice. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3-7, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Law (U.S.P.N. 2,354,817) in view of Robertson et al (U.S.P.N. 4,892,712) and further in view of Kratz (DE 19912517).

With respect to claim 1, Law discloses an ultraviolet lamp device (10) including the following: a main body (18 and 16) having a receiving tank (the unlabeled motor container for motor 51), a motor (51) is within the tank and having a rotation shaft (54), a fan blade (55), a reticular lamp-fixing element (31 and its components 32, 34, 37, 56, and 57) joined on the main body (39), a UV lamp (49) such that the lamp is positioned by the reticular lamp-fixing element (49 and 31). Further, Law's device includes an electric connection seat (46) and a power source (a required feature for the device to operate). The system of Law (31, 56, and 57) forms a network of structure for supporting the UV lamps, i.e., reticular. Law fails to teach the use of a photocatalytic lamp and also fails to explicitly disclose a stabilizer, and a starter being disposed in the main body. However, Robertson et al teaches a photocatalytic lamp that includes a glass-fiber-cloth (col.3, lines 16-20 and lines 39-59) being sleeved outside the lamp (col.6, lines 3-5, 14-16, and lines 30-33) such that the glass-fiber-cloth having a photocatalytic coating formed of titanium dioxide (col.3, lines 39-59), but fails to teach the use of a stabilizer, and a starter being disposed in the main body. Kratz teaches the use a stabilizer (4 and 6) and a starter (3) such that since the starter is in direct and close connection with the lamp (2) then it will be disposed along with the lamp in the

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main body of the device. Thus, it would have been obvious to one having ordinary skill in the art to modify the device of Law to include a glass-fiber-photocatalytic cloth such that the air to be treated can thoroughly contact the coated surfaces, and sufficient transparency to light at a wavelength to which the photoreactive material photoreacts to ensure that all the coated surfaces receive such light at an adequate energy level to ensure the catalytic or photoreactive effect (Robertson, col.2, lines 18-24).

With respect to claims 3-6 and 10-12, Law discloses the following: a germicidal wavelength range for the emitted radiation (col.2, lines 70-72), straight UV lamps (49), power sources for both of the lamps and the motor are connected (col.2, lines 66-68), and a plug is disposed on the lamp power source (47). The bottom section of lamp power source (46) not shown, acts as a switch such that the lamp is not activated until it touches this bottom surface such that this surface is in the main body.

With regard to claims 7 and 13, Law's device include a plurality of holder rods to connect to a central lump with the main body (34, 39, and 25) having a back net (29) and the reticular lamp-fixing element being the position of the central lump (31, the unlabeled motor container along with the motor 51 inside) and to connect the UV lamps. Further, the reticular lamp-fixing element includes a lamp-positioning element (32) being a panel of slightly curved shape. The lamp-fixing element has one end fixed on the reticular lamp-fixing element (35 and 31) while the other end being hooked at the electric connection seat (44 and 46).

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6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Law (U.S.P.N. 2,354,817) in view of Robertson et al (U.S.P.N. 4,892,712) and further in view of Kratz (DE 19912517) and Lee (U.S.P.N. 6,102,660).

With respect to claim 2, Law discloses a reticular lamp-fixing element that is a face net (31, 56, and 57) on which lamps are disposed and also discloses a back net (29), but fails to disclose a face net that is separate from the reticular lamp-fixing element. Both Robertson et al and Kratz fail to disclose front or back nets and also fail to disclose a reticular lamp-fixing element. Lee discloses a face net (45 and 453). Thus, it would have been obvious to one having ordinary skill in the art to modify the device of Law to include a face net for better dispersion of the treated air through the net (Lee, col.3, lines 43-45).

7. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Law (U.S.P.N. 2,354,817) in view of Robertson et al (U.S.P.N. 4,892,712) and further in view of Kratz (DE 19912517) and Monroe (U.S.P.N. 4,055,113).

With respect to claims 8-9, Law fails to disclose a rotatable face net. In addition, both Robertson et al and Kratz fail to disclose a rotatable face net and a reticular lamp-fixing element. However, with regard to claims 8-9, Monroe discloses a rotatable face net (54). Thus, it would have been obvious to one having ordinary skill in the art to modify the device of Law to include a rotatable face net in order to create air movement, which enhances flow of air (Monroe, col.2, lines 51-54).

Conclusion

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8. The prior art made of record but not relied upon is considered pertinent to applicant's disclosure. Goswani (U.S.P.N. 5,993,738), Patterson (U.S.P.N. 3,846,072), and Hak (U.S.P.N. 6,494,940) teach similar photocatalytic electric fans.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 8:30-5:00.
10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monzer R. Chorbaji *MRC*
Patent Examiner
AU 1744
05/14/2004

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